### (19) World Intellectual Property Organization

International Bureau



## - 1 (100 ) 1 (100 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 ) 1 (200 )

# (43) International Publication Date 6 May 2005 (06.05.2005)

#### **PCT**

# (10) International Publication Number WO 2005/040313 A1

(51) International Patent Classification<sup>7</sup>:

C10G 75/00

(21) International Application Number:

PCT/US2004/021468

(22) International Filing Date:

1 July 2004 (01.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/512,025

17 October 2003 (17.10.2003) US

- (71) Applicant (for all designated States except US): FLUOR CORPORATION [US/US]; One Enterprise Drive, Aliso Viejo, California 92656 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MESSER, Barry [CA/CA]; Fluor Corporation Ltd., 55 Sunpark Plaza SE, Calgary, Alberta T2X 3R4 (CA). TARLETON, Bart [CA/CA]; Fluor Corporation, Ltd., 55 Sunpark Plaza SE, Calgary, Alberta T2X 3R4 (CA). BEATON, Michael [CA/CA]; Fluor Corporation Ltd., 55 Sunpark Plaza SE, Calgary, Alberta T2X 3R4 (CA).

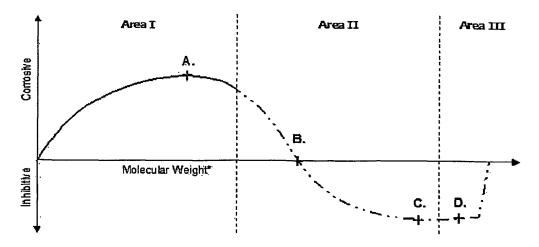
- (74) Agent: FISH, Robert; Rutan & Tucker, LLP, 611 Anton Blvd., Suite 1400, Costa Mesa, California 92626 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

— with international search report

[Continued on next page]

(54) Title: COMPOSITIONS, CONFIGURATIONS, AND METHODS OF REDUCING NAPHTHENIC ACID CORROSIVITY



x-axis is a function dominated by molecular weight and structure, including factors such as reactive sulfur, velocity, phase, temperature, and pressure; y-axis is a measure of corrosivity and/or corrosion inhibition.

(57) Abstract: Naphthenic acid corrosivity of hydrocarbon feedstocks is correlated with the chemical composition of naphthenic acids, and especially with a ratio between an alpha fraction and a beta fraction of naphthenic acids. Contemplated plants, configurations, and methods are directed to reducing naphthenic acid corrosivity of hydrocarbon feedstocks by increasing the beta fraction over the alpha fraction.



### WO 2005/040313 A1



with amended claims

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.